

THE
URBAN DISTRICT COUNCIL
OF
GREAT CROSBY.



ANNUAL REPORTS
OF THE
MEDICAL OFFICER OF HEALTH
AND
SANITARY INSPECTOR,
FOR THE YEAR 1913.

Liverpool:

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1914.



GREAT CROSBY URBAN DISTRICT COUNCIL,
1913.

SUMMARY.

Area of District in acres (as corrected)	1,867
Population (1901 Census)	..	..	..	7,555
Population (1911 .. )	..	..	..	12,274

Birth Rate .. .. .	..	..	..	20·42
Death Rate of Residents (occurring in District)	..	..	..	7·66

Per 1000 of the estimated population.

Death rate of Infants under 1 year per 1,000 Births	..	73·52
Death Rate (of Residents in and out of the District)	..	9·16

RAINFALL—

Rainfall for the past year	28·58	inches
The average rainfall for the preceding 38 years (1876-1913) being	29·83	..

TEMPERATURE—

The mean temperature during the year	49·98	degrees Fah.
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Rateable Value, £87,120 | Rate, $3\frac{1}{4}$ in £ | No. of Occupied Houses, 2,789.

(The estimated population, January, 1914, was 13,413.)

ANNUAL REPORT

OF THE

MEDICAL OFFICER OF HEALTH

FOR 1913.

THE CHAIRMAN AND MEMBERS OF THE
GREAT CROSBY URBAN DISTRICT COUNCIL.

GENTLEMEN,

The Annual Health Report for 1913 is drawn up and arranged on the lines required by the Local Government Board, and contains the necessary geographical, geological, sanitary and hygienic information. It supplies you, as you will see from its perusal, with a fair estimate of the amount of work discharged by your Health Officers during the year.

The area of the District is comprised of 1,867 statute acres above high-water mark. The Western Boundary is the sea-shore, is of very considerable extent, and is affected by the flow and ebb of the tide. The Eastern Boundary is the Township of Sefton and Thornton; the Northern is the Urban District of Little Crosby, both of which are purely agricultural districts; while the Southern is the Urban District of Waterloo-cum-Seaforth, the Waterloo portion of which is residential in character. This District of Great Crosby has always been and still is a growing and popular residential suburb of Liverpool.

The District is fairly flat, the highest point being 38 feet above high-water mark, which latter is 17 feet above Ordnance Datum, the highest part of it is therefore 55 feet above this. It is laid out somewhat on the lines of Boulevards, consisting of wide asphalted

streets, planted with trees on each side. These streets are accordingly more easily swept and kept clean, and after a fall of rain the water runs off readily into the sewers. They are thus practically self-cleansing.

The sub-soil is principally sand overlying the boulder-clay throughout its greater area, while here and there red sandstone rock shows through. From this formation it will easily be seen that the district is particularly dry, and highly suitable as a healthy residential locality.

The population at the census of 1901 was 7,555, and at that of 1911 12,274. At the present time it stands at 13,413, that is, as calculated on the basis of the census of 1911. The increase in population is still likely to continue during the coming year, as a considerable number of plans for new houses and for the laying-out of new streets have been received by the Council.

Many of the houses in the district command high rents. The number of dwelling-houses for the working classes form only a small proportion of the houses in the district. The accommodation for the working class is good, being principally four and six room houses. Every care is taken in the erection and supervision of the new buildings of this class ; the air space, etc., as required by the Bye-laws, being insisted upon.

Under the Towns Planning Act it was necessary to deal with two lots of property. In one instance, to remedy a condition of over-crowding, and in the other to instal a proper supply of water to each of seven houses, repair structural defects, improve domestic conveniences, and rectify yard pavings.

Water Supply.

This district is supplied with water from the Liverpool Corporation mains.

The service is constant and the quality excellent.

No complaint has been found as to its bacteriological or chemical composition. Neither lead nor other deleterious matters have been detected in it.

Milk Supply.

The milk supply is obtained chiefly from dairies in the district, very little being obtained from any outside source. The County police take samples of milk under "The Food and Drugs Act" for analysis.

No information has been received that any action had been found necessary to be taken by them against any of the purveyors of this commodity.

Three cases of suspected anthrax were notified by the County Police in three dairy premises, and one of these proved to be positive. These premises were accordingly visited, and, in conjunction with the Police, were thoroughly cleansed and disinfected, the Council supplying some of the disinfectants.

The various dairies and cowsheds are periodically visited, and are always found in the best condition ; in fact, some of the cowsheds in this district are "models" of what a building of this description should be. Light and ventilation are amply provided, and the Regulations of the Local Government Board are duly enforced.

Food and Drugs Act.

The County police carry out all duties under the "Food and Drugs Act," and report any food, etc., which is likely to be detrimental to health, when, if necessary, joint action is taken for its destruction.

Sewerage and Drainage.

During the past twelve months very little work of extension of main sewers or leading arteries has been executed ; but some spurs, or short sewers of a "cul de sac" description, have been carried out, more particularly for the purpose of draining streets of good-class cottages.

Strict attention is given to all drains and sewers, as well as to all connections with the latter, the same being tested and supervised during construction, with the view of bringing them into conformity with the requirements of modern sanitation.

The general condition of the sewerage of the district has been duly attended to for the purpose of making it as efficient as possible.

The institution of tall iron ventilating shafts, as well as large lamp columns (in suitable positions), is being further extended throughout the district to the sewers as well as to the drains of both old and new property.

This system of ventilation is carried out as the sewers extend.

Watercourses.

There are three watercourses in the district, viz., the "Carr Brook," the "Warrenhouse Brook," which form the south and east boundaries; and the watercourses forming the north and north-east side of the district, each flowing eventually to the sea.

Supervision has been given to them, and the owners of land on both sides of the watercourses are urged to keep them in a proper and cleanly state.

The water in these "brooks" is more or less polluted before entering our district, due to the nature of the country through which they pass, which is principally agricultural.

Excrement Disposal.

The excremental matter in this district is conveyed to the sea by the "Water Carriage System," through gravitating sewers flushed by water obtained from the Liverpool Corporation. Some places, such as farmsteads, etc., still have the old-fashioned privy attached, principally to the middens which hold manure, etc. Some of these have, however, been converted into earth closets or to W.C's.

As the land develops, and the sewers extend, all classes of premises adjacent to such system of sewers are amended and brought up to modern ideas of sanitation.

The adoption of galvanized iron "dust bins" in old property is still strongly recommended, and compelled, where necessary, in place of the open and uncovered ashpits. This improvement is greatly appreciated, as a large number have been instituted during this year, as in the past; there being no doubt that the abolition of the long storage of ashpit refuse in bulk in open ashpits, in the near

vicinity of dwelling-houses, is a menace to the public health, and that the use of galvanized iron ashbins, emptied weekly at least, prevents fermentation, and minimises the production of flies as disease carriers, if not producers.

This sanitary ashbin system is adopted in all new property.

The Council's staff remove the contents weekly from all ashbins, and also from the existing ashpits at frequent intervals, in properly constructed covered carts.

The ashpit refuse is still, as in the past, deposited on tips on agricultural land, as far as possible from dwellings.

Scavenging.

The Council's staff carry out all the necessary scavenging, main roads being cleansed daily, and all others twice weekly, an arrangement of work which gives complete satisfaction.

Flushing of Main Sewers and House Drains.

The system of flushing all the main and other sewers in the district is still carried out, as in the past, in a regular and efficient manner periodically throughout the year. The main sewers, where the most deposit is found to exist, are thoroughly cleansed by means of scraping with chains, brushes, etc.

The flushing of house drains is also efficiently carried out, more especially is this done on premises where infectious disease has occurred, and an ample supply of disinfectants is given to the inhabitants of these infected premises. The Council's staff supervise the use and distribution of disinfectants.

Nuisances.

All complaints of nuisances from foul smells, arising from any source, whenever received, have had immediate attention, and subsequent investigation as to the cause of these nuisances has been carefully made by myself and the Sanitary Inspector, and, wherever necessary, the requisite Notices have been served.

Houses Let in Lodgings.

The work carried out under this heading during the year has been as complete as in previous years. Many houses have been frequently visited, and a due watch has been kept as to any overcrowding or indecency, etc. Frequent visits were paid for the purpose of seeing that these premises were in a sanitary condition, and any other matters required by this order were duly taken cognisance of, and where necessary, remedied

Public Elementary Schools.

It was, fortunately, not found necessary during the year to issue any orders for the closing of any of the Schools in the District on account of any epidemic outbreak. The Council School and SS. Peter and Paul's School were closed in the early part of January, as a continuation of the Closing Order given in December, 1912, owing to the prevalence of diphtheria among the scholars, when these Schools were closed for four weeks.

The various schools have been cleansed and thoroughly fumigated when they were closed during the holidays.

It would be a wise action if the School Authorities would substitute good rubber mats for the fibre mats or iron scrapers. The former can be thoroughly washed and cleansed daily, and would therefore harbour no infectious dust and dirt.

In all other respects the sanitary conditions of the schools are quite satisfactory.

The water-supply, which is ample and good, is obtained from the Liverpool Corporation mains.

The drains have been flushed, treated with disinfectants, and cleansed as required.

Infectious Diseases and Hospital Accommodation.

The Infectious Diseases Notification Act, 1889, is in force in this district

All notifications received are duly enquired into, as well as the source from which the infection may have occurred. The cases are principally treated at their own homes when it is possible to properly isolate them; when, however, this cannot be carried out, the cases are removed to the Liverpool Infectious Diseases Hospital in their ambulance.

The District Council have an agreement with the Liverpool Corporation for the reception and treatment at their hospitals of all infectious diseases, which up to the present has been eminently satisfactory.

As soon as infectious cases are removed from the premises in which they occur, the rooms are fumigated with sulphur, all papers, etc., being subsequently stripped from the walls, and all necessary cleansing carried out. The same is done at the end of the period of convalescence, in connection with the cases treated at their own homes.

All bedding and clothing in contact with the patient are removed to the Council's "dry heat" stoves, and there treated.

The following table gives the number of patients removed to and treated in the Infectious Hospital for the past thirteen years:—

Census pop. 1901	1902	1903	1904	1905	1906	1907	1908	1909	1910	Census pop. 1911	1912	1913
7	17	16	10	10	6	16	13	25	11	11	32	28*

* Continued Fever 1, * Enteric 1, Scarlet Fever 4, and Diphtheria 22=28.

The average number of cases treated in Hospital for the past thirteen years is 15.5.

Hospital Account.

Cost of hospital accommodation and removal of patients:—

DR.—Outstanding account at January 1st,

1913 £24 5 11
Cost of maintenance, etc. 435 0 0

£459 5 11

CR.—Amounts received, etc. £211 4 10

Claim outstanding, January 1st, 1914 56 2 6

267 7 4

Nett cost for 1913 £191 18 7

Table of all cases of Infectious Disease notified to me during the year, together with their localities, age, etc.

	No. of Cases Notified.	Deaths.	No. sent to Hospital.	Age of Patients.
SCARLET FEVER—				
Cambridge Road	1	...	...	3 years
De Villiers Avenue	2	...	...	10 and 4 years
Liverpool Road	2	...	1	7 and 15 years
Poplar Avenue	2	...	...	6 and 30 years
Princes Avenue	1	...	...	14 years
St. Anthony's Road	1	...	...	8 years
York Avenue	1	...	...	7 years
Victoria Avenue	2	...	...	8 and 35 years
Victoria Road	5	...	3	2½, 5, 6, 6, 21 yrs.
Total (9 Males, 8 Females) ...	17	...	4	17
ERYSIPELAS—				
Agnes Road	1	...	...	22 years
Belvedere Road	1	...	...	52 years
Brighton Road	1	...	...	30 years
Ince Avenue	1	...	...	38 years
Liverpool Road (Nazareth House) ...	1	...	...	9 years
Merrilocks Road	1	...	...	19 years
Mersey Road	1	...	...	48 years
Richmond Terrace	1	...	...	45 years
Woodville Avenue	1	*1	...	71 years
Total (6 Males, 3 Females) ...	9	*1	...	9
ENTERIC FEVER—				
York Road (Male)	1	...	1	44 years
CONTINUED FEVER—				
Rosedale Avenue (Female)	1	...	1	5 years
DIPHTHERIA—				
Cambridge Drive	1	...	...	3 years
Chesterfield Road	1	...	...	11 years
College Road North	1	...	...	2½ years
Coronation Drive	1	...	...	33 years
Coronation Road	2	...	2	7 and 15 years
Cook's Lane, now Manor Road ...	1	...	...	5 years
Cook's Road	1	...	1	3½ years
Dowhills Road	2	...	...	14 and 7 years
Endbutt Lane	1	...	1	5 years
Forefield Lane	1	...	1	8 years
Islington	1	...	1	11 years
Kelvinside	2	...	...	36 years, 16 mos.
Linden Avenue	1	...	1	4 years
Little Crosby Road	2	...	2	14 and 20 years
Liverpool Road	6	...	4	9, 13, 5, 13, 6, 13 yrs.
Lune Street	1	*1	1	5 years
Mariner's Road	1	...	...	26 years
Carried Forward...	26	*2	14	26

* Died.

Table of Notified Infectious Diseases—Continued.

				No. of Cases Notified.	Deaths.	No. sent to Hospital.	Age of Patients.
Brought Forward...				26	*2	14	26
DIPHTHERIA —Continued							
Moor Lane	...	...	...	2	...	1	35 and 5 years
Moorgate Street	...	...	...	1	...	1	15 years
Poplar Avenue	...	...	...	1	...	1	21 years
Prince's Avenue	...	...	...	1	...	...	6 years
Rossett Road	...	...	...	1	...	...	12 years
St. Luke's Road	...	...	...	2	...	2	9 and 7 years
Victoria Road	...	...	...	1	...	...	2 years
Alma Vale, now Vale Road...	...	...	...	1	...	1	12 years
York Road	...	...	...	2	...	2	2 and 8 years
Total (11 Males, 27 Females)				38	*2	22	38
PULMONARY TUBERCULOSIS —							
Brown Moor Lane	...	...	...	1	...	...	24 years
Byron Road	...	...	...	1	*1	...	38 years
Cambridge Road	...	...	...	1	...	...	39 years
Harrington Road	...	...	...	1	*1	...	54 years
Ince Avenue	...	...	...	1	...	...	18 years
Little Crosby Road	...	...	...	1	...	...	43 years
Liverpool Road	...	...	...	1	...	...	6 years
Do. (Nazareth House)	...	...	...	2	...	...	13 and 9 years
Moorgate Street	...	...	...	1	*1	...	19 years
Myers Road West	...	...	...	1	...	...	35 years
Rosedale Avenue	...	...	...	1	...	...	11 years
St. Anthony's Road	...	...	...	1	...	...	21 years
St. Luke's Road	...	...	...	1	...	...	57 years
Vale Road, late Alma Vale	...	...	...	1	*1	...	50 years
Total (8 Males, 7 Females) ...				15	*4	...	15
Grand Total of Notified Infectious Cases, including Pulmonary Tuberculosis, etc. ...				81	6	28	81

* Deaths.

Diphtheria.

Thirty-eight cases of this disease were notified during the year, as against 52 cases in the previous year. Eleven of these cases were males and 27 females.

Twenty-two cases were treated in Hospital, where one female died; the remainder were treated at home, and all recovered.

This disease, although not so prevalent as in the previous year, has still continued to form the largest proportion of our infectious cases. It is, however, fortunately now showing signs of diminishing,

and its type has been milder and less virulent. This is shown by the fact that out of fifty-two cases last year there were seventeen deaths, while out of thirty-eight cases this year there was only one death. As always happens when a particular disease is prevalent in a district, many patients are reported to be suffering from that disease who, on subsequent bacteriological examination being made, are shown not to be so affected. In this respect, this year provided several such instances. It is far better for the general safety of the community that medical men should err on the side of extra caution and notify all suspicious cases. In very many circumstances, where there are no means of proper isolation and treatment, a medical man cannot afford to wait until he has received a bacteriological report on the "swab" from a patient's throat. It is far wiser, in the case of a suspicious condition of a throat, to take prompt measures.

In all cases reported "swabs" were taken from the throats of the other members of the household and sent for a bacteriological report. In very many instances these "swabs" have revealed the presence of the bacilli diphtheriæ in the throats of relatives of the patients. It was thus possible to have these persons put under treatment, and children were not allowed to return to school until the "swabs" gave a negative result.

It would be a beneficial procedure if in schools, especially where the children are drawn from the poorer classes, some attention was given to oral asepsis.

Erysipelas.

Nine cases of this disease were notified, six being males and three females, in comparison with twelve cases last year. None of these were removed to Hospital; one died from this disease.

Scarlet Fever.

Seventeen cases of this disease were notified, being 9 males and 8 females. Last year these cases numbered nineteen. Four of these patients were treated in Hospital, and all recovered; the remaining 13 were treated at home; none proved fatal.

Enteric Fever.

Only one man was notified as suffering from this disease. He was a sailor, and came ashore with symptoms of this illness. He was removed to Hospital, and made a good recovery.

Continued Fever.

A case of this description occurred in a child, who was removed to Hospital and recovered.

Tuberculosis.

Under this heading fifteen notifications were received, while last year the number was twenty-three. Those notified as suffering from this affection consisted of eight males and seven females. All were treated at their own homes. Four deaths occurred. The houses were afterwards disinfected.

The new Order, entitled the Notification and Treatment of Tuberculosis Order, came into operation on the 1st February, 1913, and entailed on every medical practitioner the duty of notifying persons suffering from any form of tubercular trouble. It will thus be seen that, as far as this District is concerned, this scourge is on the decrease, for the notifications last year only embraced people suffering from Pulmonary Tuberculosis.

The requisite work in connection with such notifications has been carefully attended to. Records have been taken, instructions as to destruction of infected articles given, and disinfectants supplied when necessary.

Plague.

Provision is arranged with the Liverpool Corporation for accommodation and treatment in case of an epidemic of Plague.

“ Contacts.”

Medical Officers of Health for Other Districts reported eight cases of “ Contacts ” with Small-pox, one of Diphtheria, and one of Scarlet Fever, of persons having been in contact with these diseases on shipboard or elsewhere, and who had come to live in this district.

These persons were duly visited, and instructions given as to prevention, etc., as well as to reporting themselves or others in case of illness. Nothing, however, transpired requiring any further action.

Health and Sanitary Condition of the District.

The health of the District during the year has been excellent, and shows a great improvement on that of the previous year. There has been a marked freedom from epidemics of all kinds, with the exception of the continuance of the presence of diphtheria. Infectious cases of all description have dropped from one hundred and fourteen cases last year to eighty-one this year. The death rate also has fallen from 13.16 to 9.16, while the population meanwhile has increased. The weather conditions were favourable, being neither continuously too hot nor too cold, people were therefore able to spend a good deal of time out of doors and participate in their various pastimes, motor runs, and healthy walks.

The erection of a Refuse Destructor would be a boon to the District, and would do away with a good many of the complaints received of the objectionable smells from the tipped rubbish, as well as to diminish the presence of flies and rats.

New Houses, etc.

The Surveyor reports that from Dec. 31, 1912, to Jan. 1, 1914, 68 sets of plans of premises have been approved, and 19 houses have been completed in accordance with the bye-laws; also 12 houses which are partially in Crosby and partially in Waterloo.

Inspection of the District.

I have, together with the Sanitary Inspector, Mr. Samuel Wilson, at various periods, systematically inspected the District; and any matters requiring amendment have been immediately taken in hand and satisfactorily dealt with.

Many other inspections have, of course, been required, and you have had reports of what has been done at your various monthly meetings.

In the Inspector's report appended will be found a detailed account of the action taken.

Birth Rate.

The number of births registered in the district during the year were 132 males and 140 females, the total being 272, giving a birth rate of **20.42** per 1,000 ; while those for last year were 125 males and 121 females, total 246.

Birth Rate for the past year is 20.42.

Census pop. 1901	1902	1903	1904	1905	1906	1907	1908	1909	1910	Census pop. 1911	1912	1913
21'44	—	—	—	—	—	—	—	—	—	20.20	19'04	20.42

Infantile Death Rate.

The number of deaths of infants per 1,000 births registered is the same as last year, viz :—20, giving a death rate of **73.52**.

General Death Rate.

The deaths registered of residents in and out of the district, and belonging thereto, is **122** (68 males and 54 females), showing a death rate of **9.16** per 1,000 of the estimated population, the number last year being 170 (87 males and 83 females).

Deaths Registered in this District only.								
Census pop. 1901	1902	1903	1904	1905	1906	1911	1912	1913
12'57	—	—	—	—	—	9'12	11'69	7'66

Deaths Registered in and out of District.						
1907	1908	1909	1910	Census pop. 1911	1912	1913
—	—	—	—	10'83	13'16	9'16

TABLE I. Vital Statistics of Whole District during 1913 and Previous Years.

Year.	Population estimated to middle of each year.	BIRTHS			TOTAL DEATHS REGISTERED IN THE DISTRICT.		TRANSFERABLE DEATHS.		NETT DEATHS BELONGING TO THE DISTRICT.			
		Un-corrected Number.	Nett.		Number.	Rate.	of Non-residents registered in the District	of Residents not registered in the District.	Under 1 Year of Age.		Number.	Rate.
			Number.	Rate.					Number.	Rate per 1,000 Nett Births.		
1908	12,663	..	244	19·26	119	9·38	9	26	24	98·36	136	10·73
1909	13,713	..	254	18·52	108	7·94	3	18	17	66·53	123	8·96
1910	14,300	..	247	17·27	105	7·34	2	20	28	113·35	123	8·60
1911	12,274	12,274	248	20·20	112	9·12	6	27	21	72·91	133	10·83
1912	12,916	12,916	246	19·04	151	11·69	7	26	21	85·36	170	13·16
1913	13,314	13,314	272	20·42	102	7·66	11	31	20	73·52	122	9·16

AT CENSUS OF 1911.—Total Population at all ages 12,274. Number of inhabited houses 2,570. Average number of persons per house 4·56. Area of District in acres (land and inland water) 1,867

Institutions within the District receiving sick and infirm persons from outside the District—Nazareth House, Liverpool Road, Great Crosby.

Institutions outside the District receiving sick and infirm persons from the district—Hatherley House, Waterloo; Liverpool Institutions; Bootle Institutions.

Is the Union Workhouse within the District? No

TABLE II.—Cases of Infectious Disease notified during the Year 1913.

NOTIFIABLE DISEASE	CASES NOTIFIED IN WHOLE DISTRICT.								
	At all Ages	At Ages—Years.							Total Cases removed to Hospital
		Under 1.	1 to 5.	5 to 15.	15 to 25.	25 to 45.	45 to 65	65 and upwards.	
Small Pox .. ..	..	..	..	..	..	..	..	..	..
Diphtheria (including Membranous Croup)	38	..	7	23	4	4	..	..	22
Erysipelas	9	..	..	1	2	2	3	1	..
Scarlet Fever ..	17	..	3	10	2	2	..	..	4
Enteric Fever ..	1	..	..	..	..	1	..	..	1
Continued Fever ..	1	..	..	1	..	..	..	..	1
Puerperal Fever ..	..	..	..	..	..	..	..	..	..
Poliomyelitis ..	..	..	..	..	..	..	..	..	..
Pulmonary Tuber- culosis .. ..	..	..	..	..	..	..	..	..	..
Totals	66	..	10	35	8	9	3	1	28

ISOLATION HOSPITAL: Liverpool Corporation Infectious Hospital.

SANATORIA: None provided at present.

TABLE III. Causes of, and Ages at, Death during 1913.

CAUSES OF DEATH.	Deaths at the subjoined ages of "Residents" whether occurring in or beyond the District.									Total Deaths, whether of Residents or Non-residents, in Public Institutions in the District.
	ALL AGES.	Under 1 year	1 and under 2	2 and under 5	5 and under 15	15 and under 25	25 and under 45	45 and under 65	65 and upwards.	
All causes { Certified (c) Uncertified	133 ..	20 ..	1 ..	5 ..	7 ..	10 ..	20 ..	41 ..	29 ..	11 ..
Enteric Fever .. ..	..	..	..	..	..	..	..	..	..	..
Small Pox .. ..	..	..	..	..	..	..	..	..	..	..
Measles .. ..	..	..	..	..	..	..	..	..	..	..
Scarlet Fever .. ..	..	..	..	..	..	..	..	..	..	..
Whooping Cough .. ..	..	..	..	..	..	..	..	..	..	..
Diphtheria and Croup ..	1	..	..	..	1	..	..	..	..	..
Influenza	1	..	..	..	..	1	..	..	..	..
Erysipelas	1	..	..	..	..	..	..	..	1	..
Phthisis (Pulmonary Tuberculosis)	7	..	..	..	1	2	1	3	..	..
Tuberculous Meningitis..	..	..	..	..	..	..	..	..	..	..
Other tub'culous diseases	1	..	..	..	..	1	..	..	..	..
Cancer, malignant disease	12	1	..	..	..	..	1	9	1	..
Rheumatic Fever .. ..	..	..	..	..	..	..	..	..	..	..
Meningitis	2	1	..	1	..	..	..	..	..	1
Organic Heart Disease..	12	..	..	..	..	..	1	6	5	3
Bronchitis	15	2	..	1	1	..	..	1	10	..
Pneumonia (all forms) ..	16	2	1	2	1	1	3	1	5	1
Other Diseases of the Respiratory Organs	1	..	..	..	..	1	..	..	..	..
Diarrhœa and Enteritis..	3	3	..	..	..	..	..	..	..	..
Appendicitis and Typhlitis	3	..	..	..	2	..	..	1	..	..
Cirrhosis of Liver .. ..	..	..	..	..	..	..	..	..	..	..
Alcoholism .. ..	..	..	..	..	..	..	..	..	..	..
Nephritis and Bright's Disease	4	..	..	..	..	..	1	1	2	..
Puerperal Fever.. ..	..	..	..	..	..	..	..	..	..	..
Other accidents and diseases of Pregnancy and Parturition ..	..	..	..	..	..	..	..	..	..	..
Congenital Debility and Malformation (including Premature Birth..	6	6	..	..	..	..	..	..	..	..
Violent Deaths (excluding Suicide)	8	..	..	..	..	2	4	1	1	4
Suicides	3	..	..	..	..	..	..	3	..	..
Other Defined Diseases	35	5	..	1	1	2	9	15	2	2
Diseases ill-defined or unknown	2	..	..	..	..	..	..	..	2	..
All causes	133	20	1	5	7	10	20	41	29	11

TABLE IV. Infantile Mortality During the Year 1913.

Deaths from stated Causes in Weeks and Months under One Year of Age.

CAUSE OF DEATH.	Under 1 week	1-2 weeks	2-3 weeks	3-4 weeks	Total under 1 month	1-3 months	3-6 months	6-9 months	9-12 months	Total Deaths under 1 year.
All Causes.										
Certified	4	1	1	3	9	3	3	3	2	20
Uncertified ... ..	...	...	...	...	...	...	...	...	...	...
Small-pox ... ..	...	...	...	...	...	...	...	...	...	...
Chicken-pox ... ..	...	...	...	...	...	...	...	...	...	...
Measles ... ..	...	...	...	...	...	...	...	...	...	...
Scarlet Fever ... ..	...	...	...	...	...	...	...	...	...	...
Whooping Cough ... ..	...	...	...	...	...	...	...	...	...	...
Diphtheria and Croup ... ..	...	...	...	...	...	...	...	...	...	...
Erysipelas ... ..	...	...	...	...	...	...	...	...	...	...
Tuberculous Meningitis ... ..	...	...	...	...	...	...	...	...	...	...
Abdominal Tuberculosis ... ..	...	...	...	...	...	...	...	...	...	...
Other Tuberculous Diseases ... ..	...	...	...	...	...	...	...	...	...	...
Meningitis (not Tuberculous) ... ..	...	...	...	...	...	1	...	...	...	1
Convulsions ... ..	...	...	...	1	1	1	...	1	...	3
Laryngitis ... ..	...	...	...	...	...	...	...	...	...	...
Bronchitis ... ..	...	...	...	...	...	...	1	1	1	3
Pneumonia (all forms) ... ..	...	...	...	...	...	...	1	...	1	2
Diarrhœa ... ..	...	...	...	...	...	...	...	...	...	...
Enteritis ... ..	...	...	...	1	1	...	1	1	...	3
Gastritis ... ..	...	...	...	...	...	...	...	...	...	...
Syphilis ... ..	...	...	...	...	...	...	...	...	...	...
Rickets ... ..	...	...	...	...	...	...	...	...	...	...
Suffocation, overlying ... ..	...	...	...	...	...	...	...	...	...	...
Injury at Birth ... ..	...	...	...	...	...	...	...	...	...	...
Atelectasis ... ..	...	...	...	...	...	...	...	...	...	...
Congenital Malformations ..	2	...	...	...	2	...	...	...	...	2
Premature Birth	1	1	...	...	2	1	...	...	...	3
Atrophy, Debility and Marasmus ... ..	...	...	1	...	1	...	...	...	...	1
Other causes	1	...	...	1	2	...	...	...	...	2
	4	1	1	3	9	3	3	3	2	20
NETT BIRTHS IN THE YEAR—					NETT DEATHS IN THE YEAR OF					
Legitimate	270	} 272				Legitimate Infants ..		20		
Illegitimate	2					Illegitimate Infants ..		No returns		

Summary of Medical Officer's Report for 1913.

Medical Officer of Health—*Dr. James Huskie*. Salary, £100.

Inspector of Nuisances—*Samuel Wilson*. Salary, £195.

What is the character of the Hospital Accommodation?—For

Small-pox—*Good*. For other Infectious Diseases—*Excellent*.

Is it Joint or otherwise?—*The Council, by Agreement, use the Liverpool Corporation Infectious Hospitals. Fees for maintenance only being paid.*

Number of Beds available for your District?—For Small-pox—*As many as required*. For other Infectious Diseases—*As many as required*.

Number of cases removed to Hospital from your District?—Small-pox, *None*; Enteric Fever, **1**; Diphtheria, **22**; Continued Fever, **1**; Scarlet Fever, **4**. Total, **28**.

Deaths in Hospital of patients from your District? From what causes?—*One only, from Diphtheria*.

How is Disinfection carried out? Houses—*By Sulphur Fumigation*.

Houses 2189 Number of Houses disinfected?—**98**, and **157** Rooms. Apparatus used for Clothing, Bedding, etc. (steam or otherwise)?—*Gas, Dry Heat*. Where is apparatus situated?—*In Council's Store Yard*.

Are any Diseases not specifically mentioned in the Infectious Diseases Notification Act notifiable (for instance, Measles, Whooping Cough, Diarrhæa, Chicken Pox, Ophthalmia Neonatorum, etc.)? If so, what are they?—*All diseases specified in the Act. Also Ophthalmia Neonatorum*.

Diseases specially prevalent?—*Diphtheria*. Period?—*Throughout the year*.

Any Schools Closed?—*Only the continuance from previous year*.

If so, for what disease?—*As in previous year*.

Number of Special Reports made under Art. XIX. (15 and 16) Sanitary Officers' Order, 1910?—**3**

Bacteriological Examinations. Number and nature of specimens examined?—*For Diphtheria, No. 112 "Swabs."*

Arrangement (if any) made under the Diphtheria Anti-toxin Order, 1910?—*The provision of Anti-toxin for poor people*.

Summary of Medical Officer's Report for 1913—Contd.

“The Housing of the Working Classes Acts, 1890 to 1909.”—Has your Authority determined the procedure to be adopted for the inspection of your District as required by Article 1 of the Regulations?—*Yes*. Has your Authority prepared, as required by Article 1 (3), a list of dwelling-houses, the early inspection of which is desirable?—*No*. Has your Authority designated an officer to undertake the special inspection of houses and to keep the records stipulated by Article 2. If so, what officer?—*M.O.H. and Inspector of Nuisances*. Have the necessary books, etc., for keeping the required records been obtained?—*Yes*.

Action taken in 1913—Number of Dwelling-houses inspected under Sec. 17 of the Act of 1909?—~~*Eight*~~^{*13*}. Number of Dwelling-houses considered unfit for human habitation?—~~*None*~~. Number of Representations to Authority with a view to making Closing Orders?—~~*Eight*~~^{*13*}. Number of Closing Orders made?—~~*None*~~. Number of Dwelling-houses in which defects were remedied without making Closing Orders?—~~*Eight*~~^{*13*}. Number of Dwelling-houses put into a fit state of habitation after making Closing Orders?—~~*Eight*~~^{*12*} *and in hand*. Number of Dwelling-houses demolished?—*None*. General character of defects found to exist?—*Drainage Defects, Water Supplies, W.C. Amendments and Overcrowding*.

Is there a deficiency of housing accommodation? If so, where?—*No*.

Source of the Water Supply?—*Liverpool Corporation Water Works*. What is its condition?—*Very good*. Is it subject to your inspection?—*Yes, if necessary*.

Is Scavenging and Removal of House Refuse carried out satisfactorily?—*Yes*. How performed (by Sanitary Authority, Contract, or Occupiers of Houses)?—*By Council's own Staff*. How is the Refuse disposed of?—*On low-lying land, and covered with soil*.

Has a Destructor been provided?—*Not up to present time*.

Sewage Disposal Works. Method of Treatment?—*None*.

What is the character of the Drainage System?—*Water Carriage. Gravitation to the Sea*.

Summary of Medical Officer's Report for 1913—Contd.

Drain Testing, Flushing, etc.?—*Both Drain Testing and Sewer Flushing are carried out constantly.*

Action taken with regard to the Pollution of Streams?—*The Cleansing and Bottoming of Water Courses and Ditches throughout the District.*

Canal Boats : Number Inspected?—*None.*

What is the condition of the Bakehouses?—*Good, receiving regular attention.*

What is the condition of the Slaughter Houses?—*None.*

What is the condition of the Lodging Houses?—*None.* Are they Registered?—*No.*

What is the Sanitary condition of the Schools?—*Good, one excellent.*

Dairies, Cowsheds, and Milkshops. Are they periodically inspected?—*Yes.* What is their condition?—*Very Good.*

Have Regulations been made under the Order of the L.G.B.?—*Are they enforced?—In all cases.*

Amount of air space in cubic feet required for each cow?—*600 cubic feet per cow in cases where the cattle are grazed, and 800 cubic feet where the cattle are stall kept and all new premises.*

Number of Cowkeepers?—**20.** Number on Register?—**20.**

Number of Dairymen or Purveyors of Milk (other than Cowkeepers)?—*None.* Number on Register?—*None.*

Action taken (if any) as to tuberculous milk?—

Total amount of Food seized as unfit for Human Consumption?—*None.*

Number of Carcases and parts of Carcases condemned for Tuberculosis?—*None.*

Number of Legal Proceedings, and result?—*None.*

Department of Inspector of Nuisances. Number of Notices served?—**116.** Nuisances remedied?—*In all cases.* Number of Legal Proceedings taken and result?—*None necessary.*

Closet accommodation of the District. Number of Privy Middens?—**28 Single, 14 Double.** Pail Closets?—*Five.* Fresh Water Closets?—**4992.** Waste Water Closets?—*None.* Number of Privy Middens converted during 1913? To W.C.'s—**24.** To

Summary of Medical Officer's Report for 1913—*Contd.*

Pails, etc.—*None*. Number of Pail Closets converted to W.C.'s ?—*One*. Does Council contribute towards the cost of conversion of either privies or pail closets, or both ? If so, how much ?—*Partially, by agreement*.

Smoke. Number of Observations ?—*Many*. Number of Legal Proceedings taken and result ?—*None*. What is the time limit allowed for the emission of black smoke per hour ?—*No time limit*.

Has the Authority adopted—

“ The Infectious Disease (Prevention) Act, 1890 ” ?—*Yes*.

“ The Public Health Acts Amendment Act, 1890 ” ?—*Yes*.

“ The Public Health Acts Amendment Act, 1907 ” ?—*Yes*.

“ The Notification of Births Act, 1907 ” ?—*No*.

Has a Health Visitor been appointed ?—*No*.

Notable Sanitary improvements during 1913—*Construction of Roads in tar macadam ; Extension of Sewers ; Amendment of House Drainage, both Amendments and Reconstruction, etc.*

Chief Sanitary requirements of District—*A Refuse Destructor*.

Factories, Workshops, Laundries, Workplaces and Homework.

1.—Inspection.

Including Inspections made by Sanitary Inspectors. or
Inspectors of Nuisances.

Premises.	Number of	
	Inspections.	Written Notices.
Factories (including Factory Laundries) ..	14	—
Workshops (Including Workshop Laundries)	19	5
Workplaces (Other than Outworkers' premises included in Part 3 of this Report.)	44	—
Total ..	77	5

2.—Defects Found.

Particulars.	Number of Defects.	
	Found.	Remedied.
Nuisances under the Public Health Act:—		
Want of cleanliness	—	—
Want of ventilation	1	1
Other Nuisances	5	5
Sanitary Accommodation insufficient	1	1
Total	7	7

3.—Home Work.

Lists received from other authorities once in the year—Outworkers,
Women—*Two*.

Lists received from other authorities once in the year—Outworkers,
Women—*Two*.

4.—Registered Workshops.

Workshops on the Register (s. 131) at the end of the year.	Number.
Important classes of workshops, such as workshop bakehouses, may be enumerated here:—	13
Factories	18
Workshops	37
Workplaces, including Laundries and Bakehouses	4
Total number of workshops on Register.. . . .	72

5.—Other Matters.

Class.										Number.
Matters notified to H.M. Inspectors of Factories										None
Failure to affix Abstract of the Factory and Workshops Act (s. 133) .										10
Action taken in matters referred by H.M. Inspector as remediable under the Public Health Acts, but not under the Factory and Workshop Act (s. 5.) ..										
Notified by H.M. Inspector										1
Reports (of action taken) sent to H.M. Inspector										None
Other										
Underground Bakehouses (s. 101) :—										2
Certificates granted during the year										None
In use at the end of the year										2

Bye-Laws

In force in the District are :—

Bye-laws as to New Streets and Buildings.

Bye-laws as to Houses Let in Lodgings.

Bye-laws as to Lodging Houses.

Bye-laws as to Dairies, Cowsheds and Milk Shops Order, 1885.

Infectious Disease (Prevention) Act, 1890.

Factory and Workshops Act ; Bakehouse Regulations.

Amended Regulations of Dairies, Cowsheds and Milk Shops

Order, 1885, came into force June 1st, 1908.

Public Health Acts Amendment Act, 1907. This Council applied for an order putting into force Clause 58 of the above Act.

Public Health Acts Amendment Act, 1907. Notices under Part V. were circulated amongst Lodging House Keepers, December 3rd, 1907.

Public Health Acts Amendment Act, 1907, Section 85 and 86. Regulations re Servants' Registry Offices and Marine Store Dealers.

Bye-laws in respect to Parks and Recreation Grounds, 1907.

Public Health (Tuberculosis) Regulations, 1908.

Notification of "Ophthalmia Neonatorum" (Compulsory), June 11th, 1910.

Housing, Towns Planning, etc., Act, Dec. 3rd, 1909.

Public Health (Tuberculosis) Regulations, 1911, & Feb. 1st 1913.

Bye-laws in respect to Sea Shore, 1911.

I am, Mr. Chairman and Gentlemen,

Your obedient servant,

JAMES HUSKIE,

Medical Officer of Health.

SANITARY INSPECTOR'S REPORT.

1913.

Disinfection.

The following tables give the particulars and the number of rooms fumigated with sulphur for infectious diseases, etc., in which the Council have disinfected the bedding, etc.

NUMBER OF ROOMS FUMIGATED.

Scarlet Fever.	Typhoid Fever.	Measles	Diphtheria	Erysipelas.	Cleansing.	Tuber- culosis	Continued Fever.	Total Rooms.
33	3	3	75	2	27	13	1	157

NUMBER OF TIMES STOVE USED, AND FOR WHAT PURPOSE.

Scarlet Fever.	Typhoid Fever.	Measles	Diphtheria	Erysipelas.	Cleansing.	Tuber- culosis	Continued Fever.	Total Stove used.
15	1	2	43	2	8	6	1	78

The following is the description and number of articles subjected to the dry heat process for which the stoves have been used :—

Beds	..	..	..	..	..	..	..	..	126
Mattresses	..	..	..	..	..	..	..	..	39
Blankets, Sheets, Counterpanes, &c.	..	..	..	..	..	..	..	..	419
Pieces of Bedding, Pillows, Bolsters, &c.	..	..	..	..	..	..	..	..	286
Wearing Apparel	..	..	..	..	..	..	..	..	627
Carpets, Rugs, &c.	..	..	..	..	..	..	..	..	195

Total No. of Pieces 1692

The following Schools were fumigated during the year, in Summer and Winter Holidays :

SS. Peter and Paul's Schools (twice)	...	8 rooms—	16
St. Luke's (Boys') School (twice)	...	3 "	6
Halsall (Girls') School (once)	...	6 "	6
Council School (twice)	...	18 "	36
Total rooms	...	...	<u>64</u>

There were no schools closed through Infectious disease this year.

In addition to the above, books from the "Carnegie" Library have been disinfected or destroyed, these having been "called in" by the librarian (Miss L. Bartlett), or collected or been returned from houses in which infectious disease occurred.

The disinfecting apparatus in use in this district is a "Dry Heat Gas Stove," which has been found to answer all our requirements.

Dairymen and cowkeepers are recommended to have sulphur fumigation applied to their cowsheds for the destruction of flies, spiders, etc., but in the past year none adopted this suggestion

This practice, if generally adopted, when the cows are out on grass, would no doubt have a very beneficial effect, both in man and beast, as well as the milk supply.

Mortuaries.

The Mortuary on the shore was not used in the past year, but the Mortuary in Council's store yard was used five times:—

One of "Suicide." (Verdict, "unsound mind.")

" "Found drowned." (How got into water not shown.)

" "Fractured skull." (By plank falling on him.)

" "Drowned." (By falling out of rowing boat.)

" "Found dead." (Killed by passenger train.)

Sanitary Improvements.

NOTICES SERVED.

Under Section	19	...	...	" P.H.A.A. Act."	...	...	...	...	—
"	62	P.H.A., 1875	...	...	...	...	...	...	—
"	91	P.H.A., 1875,	" Abatement of Nuisance "	...	...	...	...	108	
"	120	"	"	" Cleansing after Infectious Disease "	...	...	...	3	
"	75	T.I.C.A., 1847,	" Dangerous Buildings, &c."	...	...	...	...	2	
"		F.&W.A., 1901,	" Whitewash F.&W. "	...	...	...	...	—
"		Dairies, Cowsheds, and Milkshops Order, 1885	...	...	...	...	...	3	
Total								116	

Also 12 letter notices not included in the foregoing list as to various defects, nuisances, etc. And many verbal notices were given as to the cleansing of cowsheds, removal of manure, etc.

Smoke Observations.

Many observations for lengthened periods were taken in regard to "excessive smoke," but proceedings were unnecessary. There is no "time limit" in this District.

It must be noted that many of the foregoing notices are of a comprehensive nature, and apply to more than one premises. Many sanitary defects, as discovered, were pointed out to the owners or tenants at the time, which were at once amended and put right without any written notice being served, and for this reason such amendments do not appear in the following list.

It will also be seen from the Tables herewith that in the case of many houses where infectious disease occurred it was unnecessary to serve the owner or occupier with Notice under Sect. 120, as the work required was done voluntarily ; also the repair and amendments to drains, as well as other nuisances or defects, were dealt with.

The details of the notices in the foregoing tabulated list are as follow :—

DESCRIPTION OF THE SANITARY AMENDMENT.

PRIVY DEFECTS.

No. Amended

- | | | |
|----|---|----|
| 1. | Foul privies converted into properly constructed water-closets (complete) | 23 |
| | ASHPITS. | |
| 2. | Ashpits, deep and foul, filled to ground level, and suitably paved or
amended, &c. | 12 |
| | | |

WATER-CLOSET DEFECTS.

- | | | | | | | |
|-----|---|-----|-----|-----|-----|----|
| 3. | Water-closets in yard, open and defective ... | ... | ... | ... | ... | 7 |
| 4. | " " foul, cleansed or replaced ... | ... | ... | ... | ... | 15 |
| 5. | " provided with sufficient water supply | ... | ... | ... | ... | 20 |
| 6. | " " ventilating shafts or replaced and repaired | ... | ... | ... | ... | 24 |
| 7. | " " constant ventilation... | ... | ... | ... | ... | 12 |
| 8. | " choked, opened up, and cleansed ... | ... | ... | ... | ... | 8 |
| 9. | " defective joints repaired ... | ... | ... | ... | ... | 20 |
| 10. | " and soil pipe base repaired ... | ... | ... | ... | ... | 25 |
| 11. | " " choked, opened up, and cleansed | ... | ... | ... | ... | 5 |

WASTE PIPE, &c., DEFECTS.

- | | | | | | | |
|-----|---|-----|-----|-----|-----|----|
| 12. | Waste pipes trapped, cleansed or replaced | ... | ... | ... | ... | 14 |
| 13. | " defective brickwork repaired | ... | ... | ... | ... | 9 |

SUNDRY DEFECTS.

No. Amended.

14.	Animals so kept as to be a nuisance, amended	...	...	...	...	1
15.	Airways to intercepting traps provided	...	...	...	...	15
16.	Ashpits dilapidated walls,, &c., removed or repaired	...	...	...	...	6
17.	Basements cleared of sewage and disinfected	...	...	...	...	11
18.	Cesspools amended or abolished	...	...	...	...	1
19.	Drains choked, opened up and cleansed	...	...	...	...	28
20.	" reconstructed	...	...	...	...	8
21.	" joints defective from gullies repaired	...	...	...	...	25
22.	Down spouts disconnected or repaired	...	...	...	...	8
23.	Eaves, gutters, &c., replaced or repaired	...	...	...	...	7
24.	Foul smells from premises removed...	...	...	...	...	8
25.	Foul and stagnant water on premises removed or disinfected	...	...	...	...	11
26.	Gullies and drains choked	...	...	...	...	16
27.	" defective replaced	...	...	...	...	11
28.	" fenders repaired	...	...	...	...	46
29.	Intercepting traps cleansed or replaced	...	...	...	...	8
30.	Premises cleansed of manure, filth, &c.	...	...	...	...	3
31.	" provided with sanitary bins	...	...	...	...	6
32.	" cleansed and whitewashed	...	...	...	...	5
33.	" overcrowded	...	...	...	...	1
34.	Public schools disinfected (twice)	...	...	...	...	4
35.	Roof, walls, &c. (defective) repaired	...	...	...	...	3
36.	Store cisterns cleansed	...	...	...	...	33
37.	Smoke nuisances and effluvium from premises abated	...	...	...	...	1
38.	Ventilating shafts carried above roof	...	...	...	...	12
39.	Ventilation, constant, provided	...	...	...	...	12
40.	Walls, damp, amended	...	...	...	...	3
41.	Watercourse, ditches and pits cleansed	...	...	...	...	6
42.	Yard pavements repaired and made good	...	...	...	...	23

Inspections and Re-inspections made in respect to abatement of Nuisances, etc., 903.

N.B.—Many cases were tested with the smoke machine whilst the drains were open, prior to “filling in,” etc., by which means many unknown or unseen defects were disclosed, and the defects, so discovered, were duly made good and put right.

I have pleasure in stating that in carrying out the above works of “Reconstructions and Amendments,” the Council instructed their Solicitor and Clerk, Mr. Josiah Dean, in all cases of default, to write and urge the completion of the work required; this was done in all such cases, with the result that it was unnecessary for any proceedings to be taken before the Magistrates.

Ditches and Watercourses.

In February and August printed notices were posted throughout the district as usual, directing all occupiers of land, premises, etc., abutting on Ditches and Watercourses, to bottom and cleanse the same; and, although many visits and inspections have been made

with this object, and the attention of these occupiers, etc., repeatedly called to this work (when the Ditches and Watercourses are in a low and fit condition), the work is in a great many instances sadly neglected, and not executed at the time and in the manner it ought to be. Such neglect does and must entail loss, damage, extra labour, and inconvenience to those in default, as well as to those who have done their portion of the work at the right and proper time.

Smoke Test Applied to Drains.

During the year 200 tests (82 old drains, 79 new drains, and 39 retests) have been applied to house drains after infectious cases, to defective drains, and to the drains of new houses before occupation.

Fifty-four of the above tests were made in response to applications made either by the tenant or the owner of houses (for which the small charge of 5/- is made by the Council). The result has been that in nearly all the cases so tested defects in the drainage were discovered—some being of a serious, others of a less serious nature. Many of these defects could only be discovered by some method of pressure testing, hence the importance of this “test work.” There were 54 certificates issued as to the condition of drains so tested, and notices to amend the discovered defects were issued (or voluntarily carried out) in all cases for amendment or abatement of nuisances.

Infectious Disease.

The drains, gullies, etc., on those premises where infectious disease occurs, are dressed with disinfectants ; and on those premises where such diseases are being treated, the dressing is continued twice or three times weekly until the patient is convalescent. For the past year this work entailed 577 visits.

I may say here that after convalescence the drains to such infectious premises are flushed and “tested,” and any amendments required are duly insisted on.

If measures could be adopted, or instituted, to “enforce” all railway carriages, tram cars, or other public vehicles to be thoroughly fumigated and disinfected, in an apparatus properly equipped for this purpose, at regulated periods (under Regulations), not merely sponged and brushed down as at present ; also that all carpet beating and cleaning works be dealt with in a like manner, there is no doubt but that it would minimise the spread of many Infectious Diseases.

Petroleum Spirit and Carbide of Calcium.

Four Licenses for the sale and keeping of Petroleum Spirit and three for Carbide of Calcium were issued during the year. Notices were written to all persons selling Petroleum Spirit and Carbide of Calcium calling attention to the necessity of being Licensed.

No accidents or fire were reported in the district from the storing and use of petroleum spirit or carbide of calcium.

Many visits have been made to such premises, and the regulations are strictly insisted on ; all precautions being taken to ensure the safe keeping and handling of this dangerous material.

Garden Refuse.

Many occupiers still permit their gardeners and others to “dump” garden and other refuse on vacant land in the district, to the annoyance (at least) of residents. This practice is a menace to the public health, for such refuse provides the breeding grounds of flies, slugs, snails, etc., which in turn may become carriers of disease.

Lodging Houses.

Several surprise visits were made in the daytime to ascertain whether certain houses were being used as common lodging houses

One case of overcrowding was discovered, and action was taken which caused the remedying of this evil.

Manure Removal.

All dairymen and liverymen, etc., were urged to remove all manure regularly, and not to exceed a "fourteen days' " accumulation. Printed handbills were distributed, and repeated visits made, with the object of compelling the frequent removal of such material.

Registration of Domestic Servants, etc.

All known Registry Offices for Domestic Servants, etc., in the district, were visited, and the Regulations insisted on. There are now three such persons on the Register.

Flushing.

All sewers and drains in back passages (where slow gradients occur, or where stoppages were found to exist or in formation) were regularly flushed by means of the portable iron tank, with the attendant good results.

Sewer Ventilating Shafts.

Sewer ventilating shafts, and large lamp columns acting as such, were regularly tested as to their efficiency ; there being now some 73 ventilating shafts and 24 lamp columns used for this purpose on the line of the District Council's sewers. Each shaft was tested as to efficiency three times during the year ; or a total of 388 tests made.

Rats.

Twelve complaints were received from occupiers, etc., of houses whose premises were infested with rats. The Council arranged with its own employees, who, in their own time, with the use of dogs, ferrets, etc., destroyed a total of 137 during the year ; the remuneration being one penny per tail.

The Smoke Machine was requisitioned for the Destruction of Rats on the Council's Ashpit Tips, with good result, 16 being killed, and evidently many more must have been destroyed by this process, as several rats were almost dead on appearing from their runs, and very few have been seen since. However, more may be expected on account of the near proximity to farm land and watercourses.

Suspected Anthrax.

Three cases of "Suspected Anthrax" were notified by the County Police, when the premises of such "suspects" were visited by the Medical Officer of Health together with the Inspector of Nuisances. These premises were limewashed, the floors washed off with disinfectants, the sewers and drains flushed, and the manure and carcasses destroyed under supervision.

Special Reports, as directed by you, were given both by myself and in conjunction with the Medical Officer of Health.

The Weekly Returns of Infectious Diseases Notification have been duly made to the Local Government Board and the County Council, as well as Quarterly Returns to the latter.

A Census was taken of the District for the purpose of Revising the Estimated Population on the basis of 1911 Census.

Correspondence, interviews, accounts, returns, etc., and matters relative to the abatement of nuisances, and checking of infectious disease, together with matters in the interest of the Public Health, not included in the foregoing tables, etc., received due and careful attention.

RAINFALL.

The Monthly and Annual Rainfalls, also Temperatures, for the year 1913, as recorded at the Alexandra Park, Great Crosby. Together with a 38 years Record, as registered by the late T. Mellard Reade, Esq., at Park Corner, Blundellsands, from 1876 to August 24th, 1912, and since continued at the Alexandra Park, Great Crosby, are shewn in the following tables :—

The rain gauge is a 5-inch "Snowden" pattern, fixed 1 foot above ground at a height of 33.81 feet above Ordnance Datum, in latitude 53° 29" N. and longitude 3° 2" W.

Month.	Total Depth.	Greatest Fall in 24 Hours.	No. of Days on which .01 ins. or more were recorded.
January ...	3.47	0.86	Jan. 11, 1912 ... 15
February ...	0.81	0.18	Feb. 9 10
March ...	2.89	0.62	March 22 22
April ...	2.78	0.66	April 26 19
May ...	2.24	0.56	May 3 17
June ...	2.05	0.47	June 7 14
July ...	2.41	0.49	July 6 14
August ...	2.00	0.77	August 22 7
September ...	2.26	0.56	Sept. 26 13
October ...	2.21	0.33	Oct. 14 17
November ...	3.13	0.48	Nov. 12 26
December ...	2.32	0.57	Dec. 3 18
Total ...	28.58 ins	Total ...	192 days on which .01 or more were recorded

On forty-six days a "trace" of rain was recorded, and 127 days were absolutely dry.

February of this year is to be noted as one of the "driest," as only on five occasions in the past 38 years has the rainfall been less, viz., 1887, 1888, 1890, 1891 and 1895.

April was the "wettest" in this long period of years, with the exception of 1876, 1882 and 1889.

August, 1913, has been the "driest" for the past eleven years.

July 6th was the "wettest" day in the year, having 1.49 inches rainfall.

From November 4th to 21st inclusive (18 days) were wet consecutively, during which time 2.62 inches rainfall were recorded.

The rainfall for the year has been 28.58 inches, and as the average for the past 38 years is 29.83 inches, it shews this year to have been 1.25 inches below this average.

There was no rainfall recorded for a spell of 17 days, from July 22nd to August 7th inclusive.

NOTE.—At 9-15 a.m., July 7th, I found that the rain gauge had been interfered with, and some parts of the apparatus were missing. Luckily, this interference did not prevent the correct reading being taken, as the measured rainfall, 1.49 inches, was at once compared with that taken by other gentlemen in this District, who agreed that the quantity registered, viz., 1.49 inches, was quite in order. The interference with the gauge must have been sometime on the previous day (Sunday, July 6th) and prior to the heavy rainfall which took place that night.

The matter was placed in the hands of the Police, when instalments of the missing apparatus were eventually found; these pieces evidently having been placed in suitable positions for the purpose of discovery after a thorough search had been made.

Temperature.

The temperature, as recorded in a "Stevenson Screen," the Maximum and Bifurcated Minimum Thermometers, being fixed 4ft 6ins. above the level of grass lawn.

				Maximum.	Minimum.				
				A.	B.			Mean of A and B.	
January	...	...	...	43.66	...	34.80	...	39.23	Degrees Fah.
February	...	...	...	46.91	...	35.92	...	41.42	"
March...	...	...	...	49.0	...	37.35	...	43.19	"
April ...	...	...	...	53.16	...	40.01	...	46.67	"
May ...	...	...	...	59.43	...	44.88	...	52.16	"
June ...	...	...	...	64.36	...	50.66	...	57.51	"
July ...	...	...	...	65.45	...	52.90	...	59.16	"
August	...	...	...	67.14	...	52.76	...	59.95	"
September	...	...	...	64.95	...	50.21	...	57.58	"
October	...	...	...	57.76	...	46.50	...	52.12	"
November	...	...	...	52.66	...	43.28	...	47.97	"
December	...	...	...	46.69	...	39.13	...	42.91	"
The Maximum, Minimum and Mean Temperatures for the year 1913 ...				<u>55.93</u>	...	<u>44.03</u>	...	<u>49.98</u>	Degrees Fah.

The highest maximum temperature registered in the "Stevenson Screen" was 79 degrees on June 16th.

The lowest minimum temperature recorded was 19.5 degrees on December 31st.

Snow, hail and sleet occurred on 10 days. Frost on 9 days.

RAINFALL AT BLUNDELLSANDS

FOR THE PAST 38 YEARS, 1876 to 1914.

Year.	Jan.	Feb.	Mar.	April	May	June	July	Aug.	Sept.	Oct.	Nov.	Dec.	Total Inches per Year.
	Ins.	Ins.	Ins.	Ins.	Ins.	Ins.	Ins.	Ins.	Ins.	Ins.	Ins.	Ins.	
1876	.99	2.84	2.19	2.84	.54	1.99	2.29	3.03	4.14	2.53	5.21	4.66	33.25
1877	5.00	3.02	2.30	2.00	2.97	1.50	5.48	4.32	3.24	3.27	6.25	3.79	43.14
1878	3.09	1.33	1.62	1.48	3.33	2.15	.81	4.23	3.77	2.74	2.27	2.13	28.95
1879	1.58	2.58	1.23	2.49	2.01	4.34	3.41	5.77	3.25	1.48	1.11	1.97	31.22
1880	.82	2.53	2.31	1.20	2.32	2.74	4.87	1.58	3.33	4.50	4.01	5.63	35.84
1881	.68	3.95	2.69	1.59	3.14	3.03	2.50	4.04	1.50	2.75	2.63	2.96	31.46
1882	2.43	1.54	2.37	3.01	1.26	3.16	5.38	3.04	2.44	2.64	4.81	3.81	35.89
1883	3.29	1.80	1.20	.94	.67	2.33	2.97	2.20	4.82	5.00	2.68	1.64	29.54
1884	3.36	2.25	2.37	1.11	1.31	.71	4.41	2.40	2.29	1.66	1.82	3.06	26.75
1885	1.55	2.90	2.21	2.09	1.49	1.62	1.57	2.19	4.27	6.06	3.20	1.91	31.06
1886	3.65	1.28	1.79	1.78	4.87	1.33	4.59	1.58	3.41	3.99	3.02	4.82	36.11
1887	2.56	.64	1.59	.62	2.43	1.34	1.17	2.44	3.70	3.07	1.53	2.22	23.31
1888	1.39	.76	2.46	1.22	.52	1.92	5.09	3.37	.92	2.05	4.79	1.50	25.99
1889	.75	2.18	2.07	3.11	2.61	.70	2.60	3.80	2.23	3.02	2.17	3.41	28.65
1890	3.70	.73	1.97	1.03	1.98	2.36	2.27	4.12	1.89	2.28	6.08	.73	29.14
1891	1.46	.15	1.22	2.31	1.83	4.18	2.88	7.39	4.16	2.68	3.88	5.15	37.29
1892	3.17	1.97	1.25	1.46	2.86	2.92	2.10	3.40	2.62	6.38	2.49	1.90	32.52
1893	1.09	3.13	.38	.29	1.47	1.36	3.29	2.16	3.44	2.77	1.33	3.48	24.19
1894	1.94	3.32	1.55	1.72	2.02	2.09	2.33	3.30	.84	3.43	2.52	2.64	27.70
1895	2.68	.31	2.36	1.60	.62	.79	3.67	2.90	1.12	5.61	2.48	2.29	26.43
1896	1.03	1.14	3.36	1.22	.27	2.75	2.59	2.05	4.29	4.32	1.65	4.08	28.75
1897	1.00	2.20	2.45	2.53	1.32	4.12	1.00	4.25	3.61	1.56	4.34	2.99	31.37
1898	2.03	1.78	.62	1.73	3.73	1.97	.35	4.18	1.33	2.64	2.97	1.86	25.19
1899	3.48	1.37	1.78	2.48	1.96	1.71	1.71	1.03	3.64	2.47	1.25	3.17	26.05
1900	4.20	2.97	1.07	1.13	1.75	2.52	.79	6.90	.80	3.29	3.69	3.01	32.12
1901	2.19	1.43	1.38	1.28	.93	1.49	1.43	2.56	.94	2.87	3.35	3.31	23.16
1902	1.61	1.81	1.75	1.49	3.23	1.85	2.05	1.79	.72	2.85	1.62	2.05	22.82
1903	2.12	2.05	3.30	1.72	2.59	2.19	1.96	3.71	4.41	6.88	2.90	1.58	35.41
1904	2.19	4.25	1.60	1.12	1.85	1.20	.96	2.95	2.66	1.96	1.70	2.85	25.29
1905	1.16	1.09	2.87	1.96	.28	1.54	1.94	2.71	1.45	2.76	3.91	.38	22.05
1906	4.31	2.15	2.13	.79	2.52	1.53	.96	2.97	1.38	4.90	1.94	2.89	28.47
1907	1.02	1.38	1.90	.95	2.82	4.98	2.14	2.99	.59	3.99	2.68	2.47	27.91
1908	1.91	2.47	2.68	2.65	2.48	2.04	3.70	3.22	3.18	1.96	2.50	2.04	30.83
1909	1.90	.85	2.41	2.53	1.03	2.87	4.26	2.96	2.52	3.99	1.26	5.81	32.39
1910	2.89	2.55	.64	2.29	2.31	4.13	3.54	3.26	.37	3.47	4.89	2.61	32.95
1911	.70	1.88	1.08	1.81	.82	2.62	.42	2.98	4.77	2.55	2.11	3.72	25.46
1912	3.93	1.23	4.02	.17	1.74	2.76	4.19	5.58	.98	3.91	2.18	1.97	32.66
1913	3.47	0.81	2.89	2.78	2.24	2.05	2.41	2.00	2.26	2.21	3.13	2.32	28.58
Monthly average for 38 years	2.27	1.91	1.98	1.70	1.95	2.38	2.63	3.30	2.56	3.33	2.96	2.86	29.83

Average yearly Rainfall for the past 38 years is 29.83 inches.

There is nothing in particular to note in this respect excepting, perhaps, the absence of extreme heat and extreme cold—in other words, a general mildness.

The following table shews the months, arranged in order of “wetness,” averaged for the past 38 years:—

October ...	...	...	...	...	3.33 inches.
August ...	...	...	...	...	3.30 "
November ...	...	...	...	...	2.96 "
December ...	...	...	...	...	2.86 "
July ...	...	...	...	...	2.63 "
September ...	...	...	...	...	2.56 "
June ...	...	...	...	...	2.38 "
January ...	...	...	...	...	2.27 "
March ...	...	...	...	...	1.98 "
May ...	...	...	...	...	1.95 "
February ...	...	...	...	...	1.91 "
April ...	...	...	...	...	1.70 "
Total ...					<u>29.83 inches.</u>

The Record has been kept in accordance with the Rules of the British Rainfall Organization, the gauge being emptied at nine o'clock each morning, and the amount of rain measured, in a certified graduated measure, and entered to the previous day.

I have the honour to remain,

Mr. Chairman and Gentlemen,

Your obedient servant,

SAMUEL WILSON, M.San.I.Ass'n, M R.I.P.H.,

Inspector of Nuisances, etc.

January, 1914.

